

FLAGPOLES

BAARTOL COMPANY, INC.

KENTON, OHIO • PHONE: Kenton 4032



Every Baartol flagpole will enhance its surroundings and its dignified lines make it worthy to fly the symbol of American Freedom, its flag.

appearance

Baartol flagpoles are well designed, and exceptionally beautiful in appearance. Exact-ing requirements in the fabrication of metal flagpoles are met by expert craftsmen in our modern equipped shop.

safety

Flagpoles often extend to one hundred feet in the air and must be properly designed and fabricated for safety and welfare of the public. Baartol accordingly uses steel, or aluminum rather than wood, which deteriorates with the weather.

durability

Baartol metal flagpoles are scientifically designed to withstand the severest strains of wind and weather. They are lightning proof, air tight, water proof, rust resisting, insect proof, and meet rigid government specifications. All fittings are of the finest quality.

cone tapered aluminum for ground and roof setting

23 feet to 65 feet, see table, these poles withstand a simulated loading of a 100 mph wind with no evidence of permanent set and are highly recommended for maintenance free installation. The tapered portion is cold rolled to a uniform conical taper of 1" per 5'-6".

specifications

Flagpole shall be of Alcoa 6063-T6 aluminum, seamless extruded tubing, cone tapered complete with all fittings listed below, all as manufactured by Baartol Company, Inc., Kenton, Ohio. Flagpole shall be ____ ft. high (exposed) with ____ ft. below ground. The tapered portion shall be ____ ft. long; butt diameter ____ in., top diameter ____ in. (If total length of flagpole is over 38'-6", add the following*). Flagpole may be shipped in ____ sections provided with precision made, close fitting, self aligning internal splicing sleeve so that no field welding or grinding is required.

Fittings: (Architect should include descriptions of halyards and aluminum truck, ball and cleats. See page 8.)

Installation: Flagpole shall be installed where shown on plans and as detailed. (See page 6 and 7.)

Finishing: Portion of pole to be placed below ground shall be given a heavy shop coat of asphaltum paint inside and outside. Exterior surface of exposed portion of pole shall have a satin brush finish and then be heavily waxed. Flagpole shall be protected during transit with a spiral wrapping of heavy paper, covered with burlap, wood stripping and steel banding.

cone tapered steel for ground and roof setting

28 feet to 110 feet (see table) each size scientifically designed to withstand the severest strain of wind and weather. This flagpole has a machine made, straight, uniform conical tapered portion, 1" per 7.14', without visible joints or offsets; and a seamless cylindrical butt section.

specifications

Flagpole shall be cone tapered steel, (economy, standard, or extra heavy) type, complete with all fittings listed below, all as manufactured by Baartol Company, Inc., Kenton, Ohio. Flagpole shall be ____ ft. high (exposed) with ____ ft. below ground. The tapered portion shall be ____ ft. long; butt diameter ____ in., top diameter ____ in. (If flagpole is over 38'-6" over all, add the following*). Flagpole may be shipped in ____ sections provided with close fitting, self-aligning internal splicing sleeve. Field joints shall be welded and ground smooth.

Fittings: (Architect should include descriptions of truck, halyards, cleats, and ball. See page 8.)

Installation: Flagpole shall be installed where shown on plans and as detailed. (See page 6 and 7.)

Painting: A shop coat of red lead and oil paint shall be applied to all steel which will be exposed in the completed installation. When flagpole arrives at the site it shall be given one coat of approved marine paint before erection and one coat after. Color to be selected. (Architect or owner).

*All flagpoles over 38'-6" long overall should be shipped in 2 or 3 sections depending upon length of pole (see table) in order to avoid excessive tariff rates. However, flagpoles up to 65 feet overall length can be shipped via railroads in one piece.

flagpoles

steel

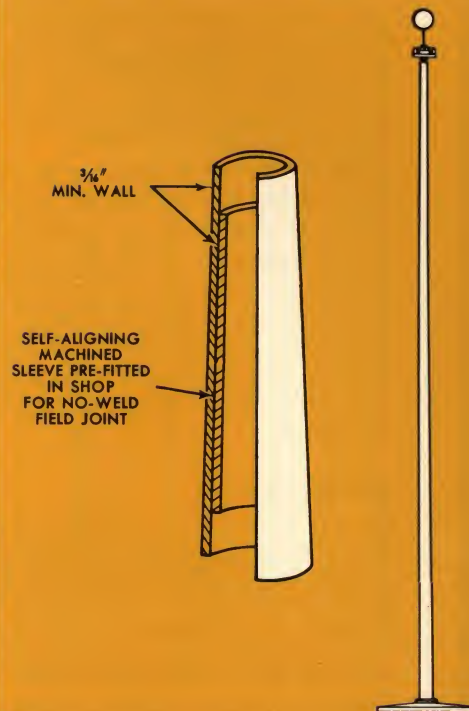
aluminum

dimensions — cone tapered aluminum for ground and roof setting

height above grade in feet	overall length feet	diameter in inches		wall thickness inches	length		diameter of ball inches	no. of shipping sections	weight lbs.
		butt O.D.	top O.D.		tapered	cylindrical			
20	23	5	3 1/4	.188	9'-8"	13'-4"	5	1	130
25	28	5 1/2	3 1/2	.188	11'-0"	17'-0"	6	1	180
30	33	6	3 1/2	.188	13'-9"	19'-3"	6	1	200
35	38'-6"	7	3 1/2	.188	19'-3"	19'-3"	6	2	280
40	44	8	3 1/2	.188	24'-9"	19'-3"	8	2	360
50	55	10	4	.188	33'-0"	22'-0"	10	2	500
59	65	12	5	.250	38'-6"	26'-6"	12	2	850

Note:

Fittings for Cone Taper Aluminum Flagpole consists of No. 14 gauge spun aluminum ball, all aluminum body and spindle, non-fouling, stainless steel ball bearings, revolving truck with double aluminum sheaves, two 3/16" diameter No. 10 cotton braided rope halyards, each with two aluminum swivel snaps for securing to flag, and two 9" cast aluminum cleats each attached to pole with 3/8" flat head aluminum machine screws.



dimensions — cone tapered steel for ground and roof setting

height above grade in feet	diameter in inches		tapered portion		straight portion		additional length for ground setting feet	ball diameter inches	no. of shipping sections	weight lbs.	
	butt O.D.	tap O.D.	length feet	wall thickness inches	length feet	wall thickness inches				ground setting	roof setting
										pole and ground protector	pole
economy type											
25	5	3¼	12½	.250	12½	.247	3½	5	1	400	335
30	5	3¼	12½	.250	17½	.247	3½	6	1	465	410
35	5½	3¼	16½	.250	18½	.258	4	6	1	615	575
40	6	3¼	19½	.250	20½	.250	4	6	2	730	675
50	6½	3¼	24	.250	26	.280	5	8	2	1040	930
59	7½	3¼	31¼	.250	27¾	.301	6	8	2	1410	1250
70	8½	3¼	38½	.250	31½	.322	7	8	3	2125	1900
75	9½	3¼	45¼	.250	29¾	.342	7½	10	3	2460	2150
80	10½	3¼	53½	.250	26½	.365	8	10	3	2850	2450
90	11½	3½	58¾	.250	31¼	.375	9	10	3	3550	3050
100	12½	3½	66	.250	34	.375	10	10	3	4300	3750

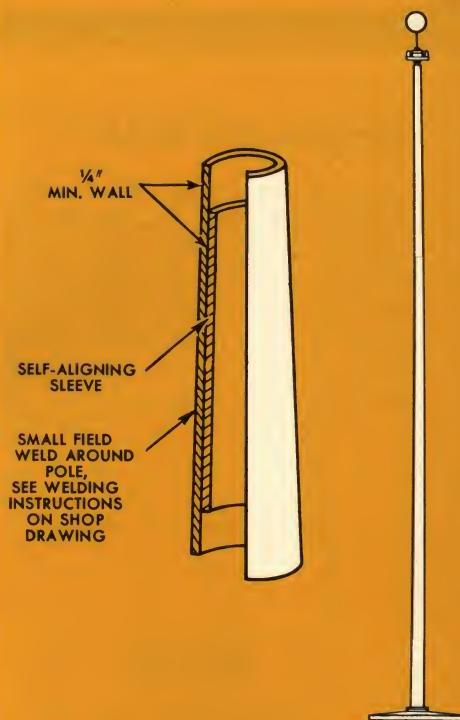
standard type

height above grade in feet	diameter in inches		length feet	wall thickness inches	length feet	wall thickness inches	additional length for ground setting feet	ball diameter inches	no. of shipping sections	weight lbs.	
	butt O.D.	top O.D.								ground setting	roof setting
20	5	3 1/4	12 1/2	.250	7 1/2	.247	3	5	1	325	265
25	5 1/4	3 1/4	16 1/2	.250	8 1/2	.258	3 1/2	6	1	430	355
30	6	3 1/4	19 1/2	.250	10 1/2	.200	3 1/2	6	1	535	450
35	6 1/4	3 1/4	24	.250	11	.280	4	6	1	700	590
40	7 1/4	3 1/4	31 1/4	.250	8 1/4	.301	4	8	2	870	730
50	8 1/4	3 1/4	38 1/2	.250	11 1/2	.322	5	8	2	1235	1040
59	10 1/4	3 1/4	53 1/2	.250	5 1/2	.365	6	10	2	1550	1235
70	11 1/4	3 1/4	60 1/2	.250	9 1/2	.375	7	10	2	2400	2000
75	12 1/4	4	62 1/2	.250	12 1/2	.375	7 1/2	12	3	2850	2390
80	14	4	71 1/2	.250	8 1/2	.500	8	12	3	3475	2785
90	15	4	78 1/4	.250	11 1/4	.500	9	14	3	4225	3400
100	16	4	85 1/4	.250	14 1/4	.500	10	14	3	5000	4035

extra heavy type

height above grade in feet	diameter in inches		length feet	wall thickness inches	length feet	wall thickness inches	additional length for ground setting feet	ball diameter inches	no. of shipping sections	weight lbs.	
	butt O.D.	top O.D.								ground setting	roof setting
30	6 1/4	3 1/4	24	.250	6	.280	3 1/2	6	1	590	490
35	7 1/4	3 1/2	29 1/2	.250	5 1/2	.301	4	8	1	775	640
40	8 1/4	4	33 1/4	.250	6 1/4	.322	4	8	1	1025	860
45	9 1/4	4 1/2	36 1/2	.250	8 1/2	.342	4 1/2	8	2	1300	1090
50	10 1/4	5	40 3/4	.250	9 1/4	.365	5	10	2	1625	1355
59	11 1/4	5 1/2	44 1/2	.250	14 1/2	.375	6	10	2	2200	1850
65	12 1/4	5 1/2	51 3/4	.250	13 1/4	.375	6 1/2	12	2	2665	2260
70	14	5 1/2	61	.250	9	.500	7	12	2	3300	2680
75	15	5 1/2	67 1/2	.250	7 1/2	.500	7 1/2	14	3	3625	2920
80	16	6	71 1/2	.250	8 1/2	.500	8	14	3	4150	3350
90	18	6 1/2	82	.250	8	.500	9	14	3	5100	4100
100	20	6 1/2	96	.250	4	.500	10	14	3	6600	5400

*For ground setting, straight portion has additional length for foundation setting see detail page 6 and 7. For roof setting when pole is anchored through roof, additional length can be added as required.



swaged sectional steel — for ground and roof setting

Swaged sectional steel flagpoles 20 feet to 125 feet, see table. These poles are manufactured by joining consecutive diminishing diameters of new seamless steel pipe with shop joint welded with a neat bevel to make them absolutely water tight, see detail.

Field joints are similar except that the joint is beveled for caulking steel to steel which eliminates field welding. The swaged sectional pole, with telescope-like appearance, is least expensive of all and has all of the quality construction features of other Baartol Flagpoles. Each size is designed to withstand wind stresses of 100 mph.

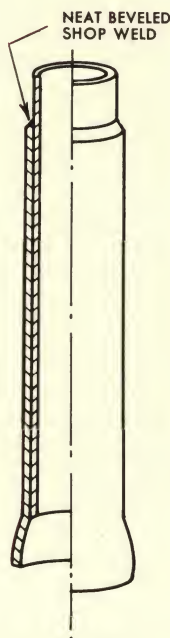
Swaged sectional poles are usually shipped in sections less than 22 feet long so that they can be shipped at lowest cost with door to door delivery via either motor freight or railroad.

specifications

Flagpole shall be steel, swaged sectional (light, heavy or extra heavy) type, complete with all fittings listed below, all as manufactured by Baartol Company, Inc., Kenton, Ohio. Flagpole shall be ____ ft. high (exposed) with ____ ft. below ground, butt diameter ____ in., top diameter ____ in. Shop joints shall be welded with a neat bevel. Flagpole may be shipped in ____ sections provided with machine beveled joints for field caulking steel to steel assuring watertight joints.

Fittings: (Architect should include descriptions of truck, halyards, cleats, and ball. See page 8.)

shop joint



Installation: Flagpole shall be installed where shown on plans and as detailed. (See page 6 and 7.)

Painting: A shop coat of redlead and oil paint shall be applied to all steel which will be exposed in the completed installation.

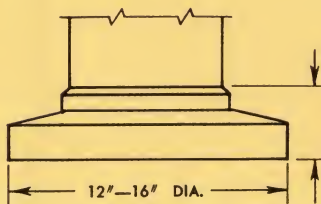
When flagpole arrives at the site it shall be given one coat of approved marine paint before erection and one coat after. Color to be selected.

(Architect or owner.)

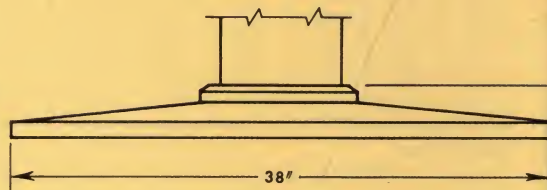
ornamental bases

Shown here are some of the most popular types of Baartol bases and flash collars for ground set flagpoles. They can be furnished in cast iron (galvanized or painted), cast aluminum (with a satin finish) or cast bronze (with a brush finish). Our pattern shop is equipped to work with the architect on custom designs.

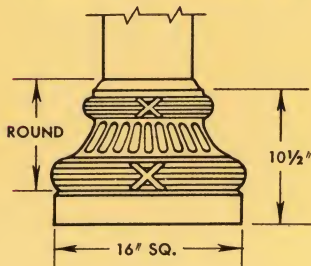
STYLE FC-1 5" to 8 5/8"



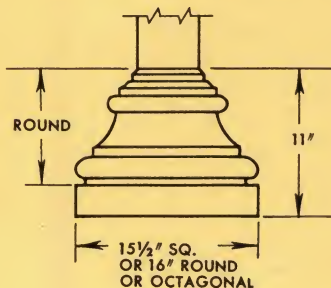
STYLE FC-2 6" to 9 5/8"



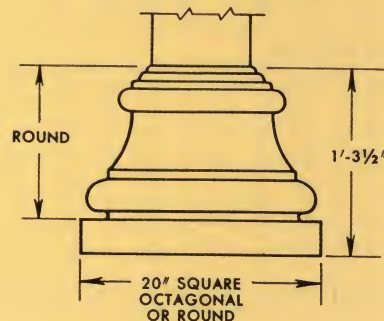
STYLE BH 5 1/2" to 7 5/8"



STYLE BB 5" to 6 5/8"



STYLE BB-1 7" to 8 5/8"



dimensions

flagpoles

steel

aluminum

*height above grade in feet	diameter in inches		additional length for ground setting	ball diameter inches	no. of pole sections	no. of shipping sections	weight lbs.		
	butt O.D.	tap O.D.					ground setting	roof setting	
							pole and ground protector	pole	additional per foot
light type									
17	3½	2¾	3	5	3	1	150	127	7.6
25	4	2¾	3½	5	4	2	256	224	9.2
33	4½	2¾	4	6	5	2	365	322	10.8
41	5	2¾	4½	6	6	3	500	444	12.5
49½	5¾	2¾	4½	6	7	3	660	594	14.6
57½	6½	2¾	5	6	8	4	870	775	19.0
65½	7½	2¾	6	8	9	4	1130	989	23.5
73	7½	2¾	6	8	9	5	1310	1169	23.5
80	8½	2¾	7	8	10	3	1630	1430	28.6
90	9½	2¾	8	10	11	3	2180	1910	33.9
100	10¾	2¾	8	10	12	3	2735	2410	40.7

heavy type

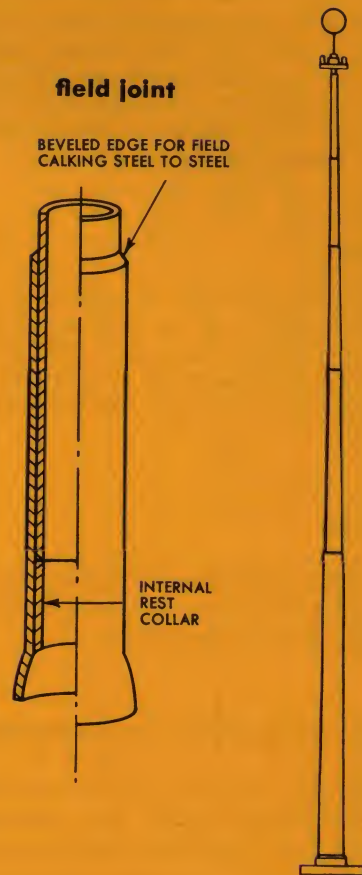
20	4	2¾	3	5	3	2	225	178	9.2
25	4½	2¾	3½	5	4	2	315	257	10.8
30	5	2¾	3½	6	5	2	415	347	12.5
40	5¾	2¾	4	6	6	3	615	526	14.6
50	6½	2¾	5	8	7	3	860	725	19.0
60	7½	2¾	6	8	8	4	1230	1045	23.5
70	8½	2¾	7	8	9	3	1620	1368	28.6
75	9½	2¾	7½	10	10	3	1974	1624	33.9
80	10½	2¾	8	10	11	3	2478	2054	40.7
90	11½	2¾	9	10	12	3	3008	2522	45.6
100	12½	2¾	10	12	13	4	3600	3022	49.6
125**	14	3½	12	14	13	4	5872	5110	63.4

extra heavy type

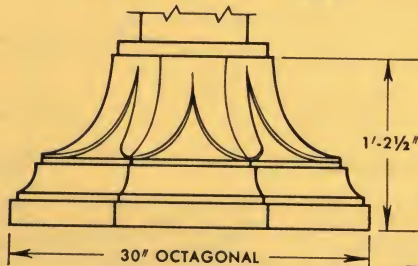
25	5	2¾	3½	6	5	2	378	335	12.5
30	5¾	2¾	3½	6	6	2	498	447	14.6
35	6½	3½	4	8	6	2	731	655	19.0
40	7½	3½	5	8	7	3	985	868	23.5
47	8½	3½	6	8	8	3	1331	1160	28.6
55	9½	3½	6	8	9	2	1725	1485	33.9
62	10½	3½	7	10	10	2	2217	1932	40.7
70	11½	4+	7	10	10	3	2780	2460	45.6
77	12½	4+	8	12	11	3	3542	3145	49.6
85	14	4+	8	12	12	3	4319	3812	63.4
90	14	4+	10	14	13	3	5288	4654	63.4
100	16	4+	10	14	14	3	6071	5244	82.7

*For ground setting, straight portion has additional length for foundation setting see detail page 6 and 7. For roof setting when pole is anchored through roof, additional length can be added as required.

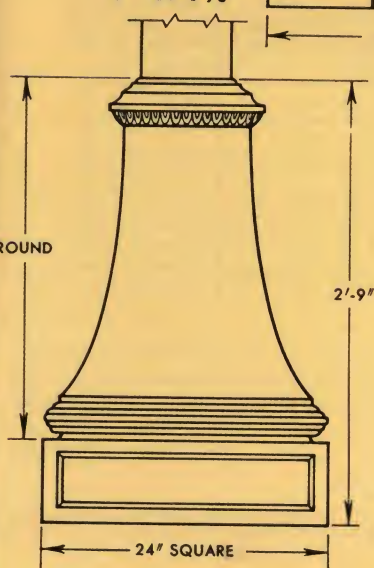
**Furnished with extra heavy bronze revolving truck.



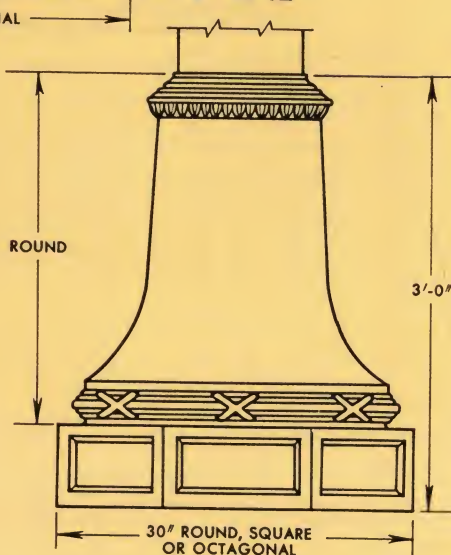
STYLE BG 7" to 10¾"



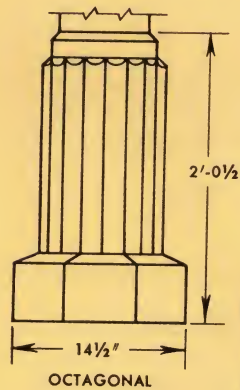
STYLE BE 7" to 9⅝"



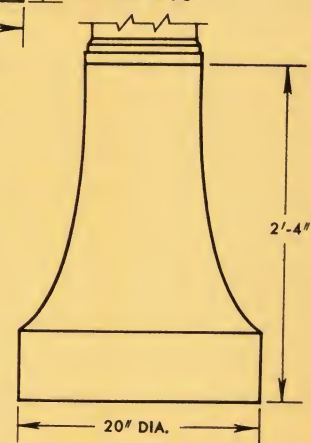
STYLE BP-1 8" to 12"



STYLE BX 5½" to 7⅝"



STYLE BR 6" to 8⅝"



mounting details

Baartol can furnish flagpoles for any kind of mounting: on the ground, on the roof or on the wall. This catalog cannot cover every possible condition but Baartol engineers welcome the opportunity to work with the architect in solving difficult or unusual mounting problems.

vertical

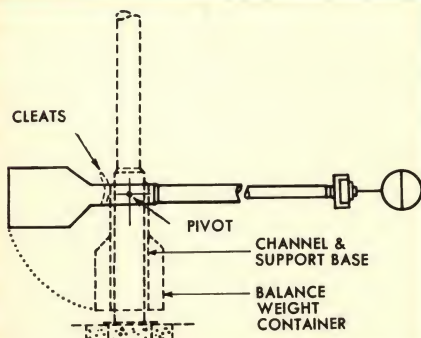
Vertical flagpoles may be placed on the roof or on the wall, as well as on the ground. See details on page 7. The structure of the building must be prepared to accommodate wall and roof-mounted poles.

outrigger

The mounting brackets for outrigger flagpoles must be built in the structure of the building. See details on page 7.

tilting—for ground or roof mounting

A little more expensive in first cost but simplifying maintenance, this mounting is available for aluminum poles only because of weight. The pole is counterbalanced and pivoted so one man can tilt it.



specification (abridged)

Flagpole shall be aluminum, seamless, cone tapered, complete with counter-balanced steel tilting arrangement, consisting of two vertical structural channels welded to base plate, steel container for counterweights, galvanized steel internal sleeve for mounting pole, pivot bolt, locking clips, and anchor bolts for concrete base, and lightning ground rod and wire, all as manufactured by Baartol Company, Inc., Kenton, Ohio. Flagpole shall be ____ ft. high. The tapered portion shall be ____ ft. long.

Finishing: Aluminum pole shall have satin brush finish heavily waxed. Steel tilting arrangement shall be given one shop coat of red lead and oil and two field coats of marine white.

in the ground specifications

Provide an integrally welded foundation tube assembly consisting of the following components: tube, base plate, tube support plate, grounding spike, and internal steel centering wedges. Tube shall be of 16 gauge galvanized corrugated steel*, ____ ft. long, ____ in. in diameter (see tables). Base plate shall be $\frac{3}{8}$ " (or $\frac{1}{2}$ ") steel ____ x ____ (see table). Centering wedges shall be welded inside tube and on plate.

Lightning grounding spike shall be $\frac{3}{4}$ " steel rod ____ ft. long (see detail for normal conditions; special site conditions may dictate a longer rod).

The excavation shall be at least four times pole butt diameter at the bottom and five times the butt diameter at the top and ____ ft. deep (see table or be governed by site conditions). After setting the tube in the hole as per manufacturers detail and making certain that grounding spike is properly grounded, the excavation shall be filled in one pour with 1-2-4 concrete to within ____ in. of finished grade. (Allow for marble, stone, or other special base or a grout cap of 1-2 concrete mix.)

After the concrete has cured at least 14 days, the pole may be erected. The pole shall be centered plumb and true in the tube with temporary wood wedges and then the tube shall be filled with screened dry sand and thoroughly tamped at 6" intervals. The tamped sand shall be thoroughly moisture sealed with 2" of approved caulking between pole and tube.

After the installation thus far has been inspected and approved by the architect, ornamental base No. ____ shall be lowered into place.

Note to contractor: If requested, the foundation tube assembly will be shipped prior to shipment of the flagpole. This may assist in expediting and coordinating the work.

*Foundation ground tubes are furnished in three types, No. 16 gauge galvanized corrugated steel tube, No. 12 gauge rolled steel tube or standard seamless steel pipe. All tubes have an effective lightning ground rod spike with support plate welded to the base plate of tube, thus permitting lightning to pass directly to the soil. Separate ground rods of copper-clad or galvanized steel with horizontal copper wire attached to pole and rod may be used, however this method is not as effective as the welded spike method.

galvanized corrugated steel foundation tubes

butt diameter of pole	foundation tube diameter	base plate size	support plate size
up to 5½" O.D.	8" I.D. x # 16 ga.	¾" x 12" x 12"	¾" x 6" x 6"
5½" O.D. thru 7" O.D.	10" I.D. x # 16 ga.	¾" x 14" x 14"	¾" x 7" x 7"
7" O.D. thru 8½" O.D.	12" I.D. x # 16 ga.	½" x 18" x 18"	½" x 9" x 9"
8½" O.D. thru 12" O.D.	15" I.D. x # 16 ga.	½" x 20" x 20"	½" x 10" x 10"
12¼" O.D. thru 14" O.D.	18" I.D. x # 16 ga.	½" x 24" x 24"	½" x 12" x 12"
15" O.D. thru 16" O.D.	21" I.D. x # 16 ga.	½" x 27" x 27"	½" x 12" x 12"
18" O.D. thru 20" O.D.	24" I.D. x # 16 ga.	½" x 30" x 30"	½" x 14" x 14"

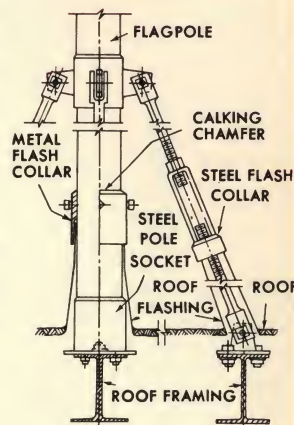
flagpoles

steel
aluminum

on the roof

Roof set flagpoles are furnished in cone tapered aluminum, cone tapered steel, swaged sectional steel (see pages 2 thru 5) and can be fabricated with rod (see illust.) or pipe turn-buckle types complete with brace collar, pole socket, brace plates, bolts, braces and flash collars.

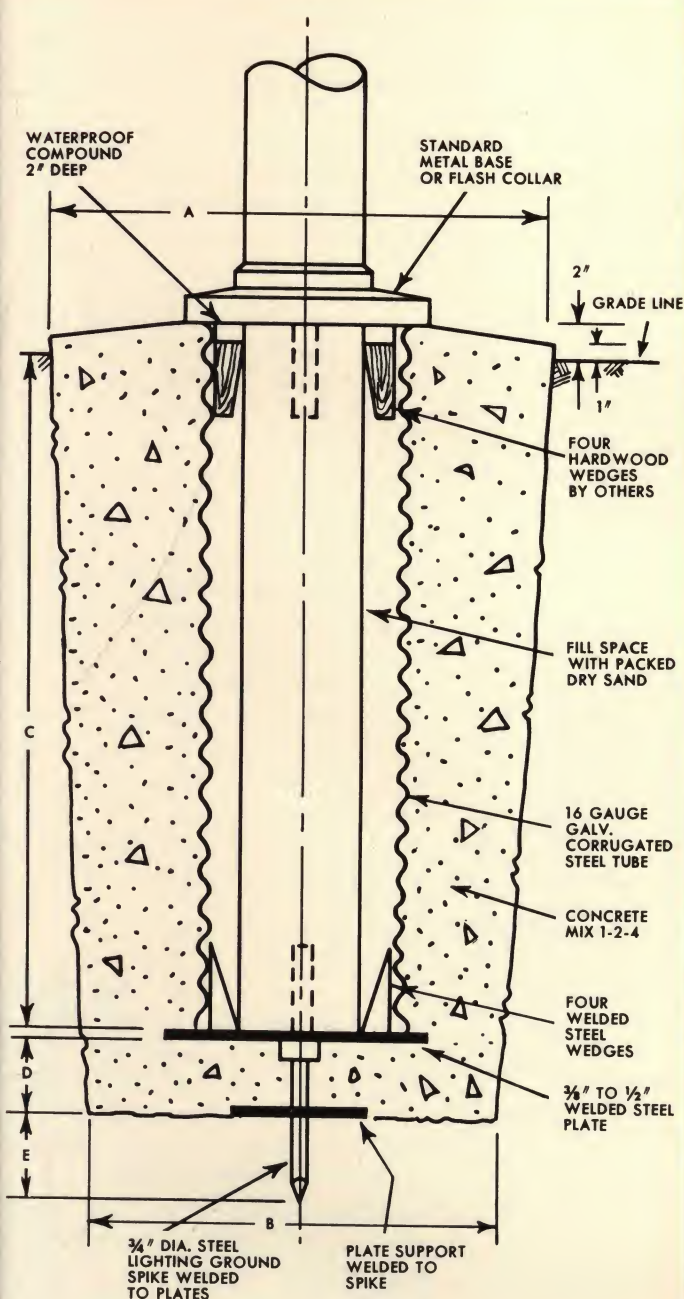
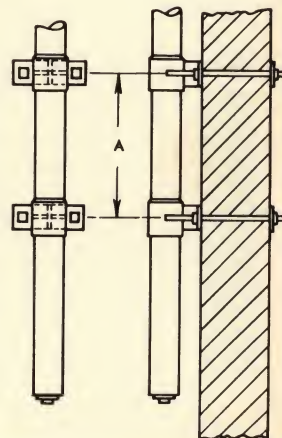
Braced flagpole supports should be installed to roof framing of building when under construction for the most satisfactory installation. Fittings for these poles are found on page 8.

on the wall
outrigger

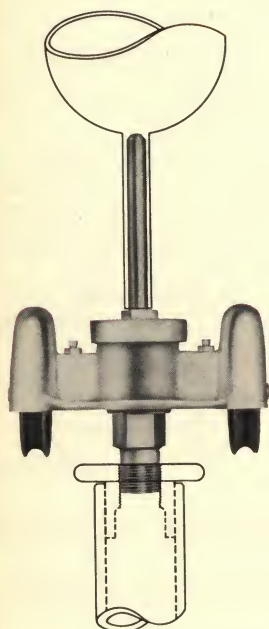
Baartol outrigger flagpoles are made in tapered steel and aluminum with a wide variety of ornamental bases available in both the braced and unbraced types. This type flagpole is usually installed at a 45° fixed angle from the wall, and secured to wall with concealed fastenings. Unbraced poles should not exceed 15'-0" in length while braced poles can be fabricated to 23'-0" in length and to any angle. Additional information and data will be furnished upon request. Fittings for these poles are found on page 8.

vertical

Baartol vertical wall mounted flagpoles are made in tapered steel and aluminum and are available with several wall bracket arrangements. Aluminum poles can be furnished in lengths up to 44'-0" and in steel up to 30'-0". Bracket spacing (dimension A) for these poles should not be less than 10% of the overall pole length to insure rigid support. Additional information and data will be furnished upon request. Fittings for these poles are found on page 8.



- A.**—Concrete base diameter at least five times the outside diameter of butt and never less than 30" diameter.
B.—Concrete base diameter at least four times the outside diameter of butt and never less than 24" diameter.
C.—Pole should set in foundation 10% of pole height above grade and never less than three feet.
D.—Concrete base footing thickness should be 0.15 inches for each foot of pole height above grade and never less than 4" thick.
E.—Lightning rod ground spike should extend into solid ground for the same distance as footing thickness.

flagpoles**steel****fittings****aluminum****truck assembly**

Baartol double sheave revolving trucks are available in two sizes, (standard size) with two-2½" diameter sheaves for top diameters up to 3½-in. and (extra heavy size) with two-4" diameter sheaves for top diameters of 4-in. and over. These trucks are non-fouling and waterproof, are accurately machined and balanced with each truck equipped with two races, each containing thirteen ⅜-in. diameter ball bearings.

Each size Baartol truck is assembled with All Bronze parts and bearings or in All Aluminum parts with stainless steel bearings. They require no lubrication nor attention of any kind even under the severest weather conditions. Single sheave revolving trucks are also available in bronze and aluminum. *NOTE: Aluminum trucks should always be specified for aluminum poles.*

ball

Baartol seamless balls are available in No. 14 ga. spun aluminum (satin brushed waxed finish) mounted on a ¾-in. seamless aluminum tubing, and in 20 oz. spun copper seamless balls covered with 23-karat gold leaf over three coats of waterproof paint, and one coat of waterproof gold sizing, with ball being soldered to a ¾" brass tubing which slips over the bronze finial in the revolving truck. Chromium plated balls are available. Ball is also available with spread eagle which is hand made of heavy copper and covered with 23-karat gold leaf same as ball. Standard sizes are available in 6" multiples from 24" to 48" spread. (Wingspread in inches should be about one half of pole height in feet.)

acorn pole cap with sheave

Cast acorn pole caps with single sheave pulley are made in steel, aluminum and bronze and are generally used at the top of outrigger poles. Gold leafed or aluminum balls may be substituted in place of the acorn if desired.

cleats

Baartol cleats are 9-in. long and are made in cast iron galvanized, cast aluminum, cast bronze and are tapped to pole with ⅜-in. flat head machine screws of identical material as in the cleats.

flagsnaps and halyards

Baartol swivel flagsnaps are furnished in bronze, aluminum and chromium plated bronze. These are spliced to the ends of halyards for securing to flag. Baartol halyards are supplied in ⅜" diameter extra long fiber manila rope, ⅝" diameter No. 10 or ⅜" diameter No. 12 cotton braided rope. Each halyard is equipped with two galvanized thimbles and two swivel snaps.

installations

COVER: Cincinnati Armory and Field House—
University of Cincinnati
Architect: James E. Allen

Page 2: Woodward High School,
Cincinnati, Ohio
Architect: Charles Cellarius

U. S. Naval Medical Center—Washington, D. C.
Rio Tierra Junior High School—
Sacramento, Calif.

Pacific Telephone & Telegraph Co.—
Fresno, Calif.

Portage Paric—Chicago, Ill.

West Mesa Air Force Station—
Albuquerque, N. M.

U. S. Post Office—Fostoria, Ohio

U. S. Post Office—Shawnee, Okla.

U. S. Post Office—Hastings, Nebr.

U. S. Post Office—Corvallis, Oreg.

U. S. Post Office—Burlington, Wisc.

U. S. Post Office—Ann Arbor, Mich.

U. S. Post Offices throughout the U.S.A.

U. S. Printing Office—Washington, D.C.

Court House—Bloomington, Ill.

Garfield Senior High School—Hamilton, Ohio

Palmer Park Elementary School—
Prince Georges County, Md.

Veterans Administration Facility—
Fayetteville, N. C.

Lackawana High School—Lackawana, N. Y.

Manufacturers National Bank—Dearborn, Mich.

Shell Oil Company—Indianapolis, Ind.

Kensington Heights Housing Project—
Buffalo, N. Y.

General Electric Company—Evendale, Ohio

General Motors Corp.—Harmarville, Pa.

State Teachers College—Geneseo, N. Y.

U. S. Reserve Training Center—Rochester, N. Y.

Globe Union Bldg.—Dallas, Texas

United Steel Workers Building—Buffalo, N. Y.

Shriners Hospital—Lexington, Ky.

American Red Cross Headquarters—
Washington, D.C.

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